Supreme Court, U.S.
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No. ———

In the Supreme Court of the United States

DEERING PRECISION INSTRUMENTS, L.L.C.,
Petitioner,

v.

VECTOR DISTRIBUTION SYSTEMS, INC., et al.,
Respondents.

On Petition for a Writ of Certiorari to the United States Court of Appeals for the Federal Circuit

PETITION FOR WRIT OF CERTIORARI

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QUESTIONS PRESENTED

1. Whether applying Festo amendment-based prosecution history estoppel to an amendment changing the form but not the substance of a patent claim extends prosecution history estoppel beyond any reasonable expectation of patent applicants?

2. Whether a patent applicant should be required to foresee that a claim, never amended during prosecution, would be subject to Festo amendment-based prosecution history estoppel because it shared an element with an amended claim?

3. Whether the Federal Circuit's rigid interpretation of prosecution history estoppel will force patent applicants to contest the rejection of every claim, thereby rendering patent prosecution inefficient and unduly contentious?

PARTIES TO THE PROCEEDINGS AND RULE 29.6 STATEMENT

The Petitioner is Deering Precision Instruments, L.L.C.

Pursuant to Supreme Court Rule 29.6, Petitioner states that no parent corporations or publicly held companies own 10% or more of the Petitioner's stock.

The Respondents are Vector Distribution Systems, Inc. and Gram Precision Scales, Inc.; and Mohan Thadani.

Petitioner makes no representations regarding Respondents' corporate affiliations.

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OPINIONS BELOW

The opinion of the District Court for the Northern District of Illinois (Pet. App. 22a-34a) is unpublished and available at 2001 WL 1035713. The opinion of the United States Court of Appeals for the Federal Circuit (Pet. App. 1a - 21a) is reported at 347 F.3d 1314.

JURISDICTION

The judgment of the United States Court of Appeals for the Federal Circuit was entered on October 17, 2003. The jurisdiction of this Court is invoked pursuant to 28 U.S.C. § 1254(1).

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

Article 1, § 8, clause 8 of the Constitution provides:

> Congress shall have the power . . . to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their Respective Writings and Discoveries.

35 U.S.C. § 271(a) provides:

> Except as otherwise provided in this title, whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States or imports into the United States any patented invention during the term of the patent therefor, infringes the patent.

STATEMENT OF THE CASE

U.S. Patent No. 4,744,428 ("the '428 patent") covers a pocket-size scale with a unique arrangement of elements rendering it lightweight and portable, but still capable of weighing substances of up to ten grams with great accuracy. (JA28). Plaintiff Deering Precision Instruments L.L.C. ("Deering") has produced and sold thousands of pocket size scales covered by the '428 patent, all marked with the patent number.

In early 2001, Deering discovered that Vector Distribution Systems, Inc. ("Vector") had begun selling a pocket-size scale, the VX-10, that was nearly identical to Deering's own pocket scale, also covered by the '428 patent. Vector has admitted that it did not independently develop its scale, but rather based the design on the Deering scale. (JA170-71).[1]

On February 16, 2001, Deering brought suit against Vector.[2] (JA17-23). Deering sought an injunction against Vector's infringement of Deering's '428 patent and money damages for Vector's prior sales of VX-10 scales. (JA22).

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[1] Although the Joint Appendix from the Federal Circuit is not included with this Petition because it is voluminous, citations to it are included to aid the Court should it grant certiorari. And, upon the Court's request, Deering will provide the Court with a separate appendix containing the Federal Circuit Joint Appendix.

[2] Other defendants are related companies Gram Precision Scales, Inc. ("Gram"), the scales' manufacturer, Bonso Electronics International, Inc. ("Bonso"), and Vector's President, Mohan Thadani.

The '428 Patent

The '428 patent discloses a lightweight portable scale with sliding weights and an associated carrying case. (JA28). Claims 1 and 4 are relevant to the appeal. (Pet. App. 2a-3a).[3] Claim 1 is an apparatus claim and Claim 4 is an apparatus claim written in means plus function form. (JA30).

The claims generally relate to a lightweight, pocket-sized scale having a combination of the following elements: a base; a beam having a substance holder at one end and a scale extending towards the opposite end; a pair of metallic fulcrum posts; a sliding weight carried by the beam for movement along the scale; a metallic insert set into said sliding weight; and said sliding weight being "disposed substantially in an imaginary plane containing the fulcrum" when in a zero position (the "Zero Position Element"). (JA30).

The stated purpose of the patent is to provide a small, pocket-sized scale of minimum weight which is able to accurately measure weights greater than the weight of the scale. (JA29-30). The sliding weight increases the weight the scale can accurately measure. Id. Locating the sliding weight to substantially neutralize it with respect to balancing the scale in its zero position minimizes the counter-balancing weight required and, therefore, minimizes the overall weight of the scale. (JA30).

The device is illustrated in the Federal Circuit Opinion. Pet. App. Foldout Exh. 1, Fig. 2.

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[3] Claims 2 and 5 depend from those claims and present no independent issues for this appeal.

Vector admits, for purposes of its summary judgment motion, that its VX-10 scale infringes every element of Claims 1 and 4 except the "Zero Position Element." (Pet. App. 27a) Vector's scale locates the sliding weight 1/10 of an inch to the center of the plane of the fulcrum, as illustrated in the Federal Circuit Opinion. Pet. App. Foldout Exh. 2, Fig. 2.[4]

Deering submitted the declaration of an experienced mechanical engineer, who explained the weights and balances in detail and averred that the impact of moving the sliding weight 1/10" to the side of the fulcrum was minor, insubstantial, and would be viewed by those of ordinary skill in the art as such. It is not seriously contested that the affidavit identified a genuine issue of fact as to equivalence.

Prosecution History

The Federal Circuit's decision in this case extends the doctrine of prosecution history estoppel well beyond the reasonable expectations of patent practitioners. This petition describes the prosecution history at issue here in some detail.

The '428 patent was filed on September 29, 1986, and initially contained ten claims. (JA25). The three Application Claims relevant to this Court's analysis are Application Claim 1 (independent, having no Zero Position Element), Application Claim 3 (depending from Claim 1, and adding a

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[4] Deering disputes the accuracy of the dimensions of this illustration, prepared by Vector. In the Disrict Court, Deering's expert witness opined that the location of the sliding weight in its zero position is actually considerably closer to the plane of the fulcrum than shown in this illustration. But Deering references the illustration to help the Court visualize the instant case.

Zero Position Element) and Application Claim 9 (independent, essentially a combination of Claims 1 and 3 written in means plus function form.) (JA92 & 94). On April 24, 1987, the United States Patent and Trademark Office ("USPTO") issued an office action rejecting Application Claim 1 as obvious under 35 U.S.C. § 103.[5] It objected to (but did not reject) Claims 3 and 9 as being dependent on a rejected base claim. (JA95). (That latter objection was erroneous as to Application Claim 9, since Claim 9 was in fact an independent claim.) The Examiner specifically stated that both Application Claims 3 and 9 "would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims." (JA97) Thus, in the very first Office Action, the Examiner found that what later became Patent Claim 1 and Patent Claim 4 were different from, and patentable over, the relevant prior art.

In response to this Office Action, the applicant amended the application, stating that "Claim 3 has been rewritten as

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[5] The Examiner's obviousness objection of Application Claim 1 was based on U.S. Patent No. 3,082,833 ("Myers") in light of U.S. Patent No. 4,050,531 ("Ashbrook"). (JA96-97). Myers teaches a scale with an integral storage area. The base of the Myers scale includes several countersunk chambers for storage of the scale's load pan and balance beam components after they are disassembled. (JA105). Ashbrook describes and claims a scale having two balance pans such that a substance to be weighed is placed in one pan and substances of known weight are added to the other pan until the two pans balance each other indicating that the same weight is in each pan. Neither Myers nor Ashbrook teach the minimization of the weight of the scale, use of any sliding weights, placement of sliding weights, use of plastic components to reduce weight, or a pocket-sized configuration.

new Claim 11 and contains all of the limitations which appeared as original Claim 3 and Claim 1 from which it was dependent." (JA109-10). The language of new Application Claim 11 was identical to that of old dependent Application Claim 3. (JA108-110). That claim issued without amendment as Patent Claim 1. The applicant also pointed out that Application Claim 9 had been mistakenly rejected as being dependent on a rejected base claim. That claim issued without amendment as Patent Claim 4. (JA110-11 & 94). Patent Claims 1 and 4 were thus claims that existed in the original Application in dependent (Claim 1) or identical (Claim 4) form.

The Rulings Below

Defendants moved for summary judgment before any discovery, admitting, for purposes of their motion that the VX-10 scale contained all elements of Claims 1 and 4 except for the Zero Position Element. Deering's request for discovery was denied, and the parties briefed the issues of claim construction, literal infringement and infringement under the doctrine of equivalents. The District Court adopted defendants' proposed claim construction, finding no literal infringement based on that claim construction. (Pet. App. 30a-31a). The District Court found no infringement under the doctrine of equivalents relying on what was, at that time, the absolute bar to equivalents for amended claims under the Federal Circuit decision Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 234 F.3d 558 (Fed. Cir. 2000) (en banc) ("Festo I"). (Pet. App. 32a-34a). The District Court applied that absolute bar to both Patent Claim 1 (a claim that existed in the original application as a dependent claim) and to Claim 4 (which was never amended). (Pet. App. 33a-34a).

The Federal Circuit stayed the appeal pending this Court's ruling in Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 535 U.S. 72, 122 S. Ct. 1831 (2002) ("Festo II"). After that ruling, the Federal Circuit held oral argument and issued its decision. (Pet. App. 1a-21a). That decision substituted a new claim construction and upheld a finding of no literal infringement based on that claim construction. (That claim construction and literal infringement finding are not challenged here.) (Pet. App. 10a-15a).

With regard to infringement under the doctrine of equivalents, the District Court had found that Claims 1 and 4 were entitled to no range of equivalents based on the doctrine of equivalents as it existed at that time (the absolute bar of Festo I.) (Pet. App. 34a). The Federal Circuit adjusted that ruling in view of the Supreme Court decision in Festo II, finding that the Zero Position Element of Claim 1 and Claim 4 were rebuttably presumed to have no range of equivalents. (Pet. App. 19a). A month prior to the Deering v. Vector decision, the Federal Circuit had decided the remand in Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd., 344 F.3d 1359 (Fed. Cir. 2003) (en banc) ("Festo III"), which narrowed the methods of rebutting the presumption and limited evidence that could be considered on the question. Id. at 1368-70.

The Federal Circuit's ruling in Deering v. Vector changed the law in two ways, with broad implications for future patent practice and litigation. (Pet. App. 1a-21a). First, it extended the application of amendment-based prosecution history estoppel to claims that were not substantively amended, based on the cancellation of a broader claim. (Pet. App. 16a-18a). Thus, a decision that is typical during patent prosecution - canceling a broader claim and relying on a narrower one that the Examiner identifies as allowable - had the unforeseeable

impact of limiting that narrower claim to its literal terms. Second, extrapolating from that ruling, the Federal Circuit applied amendment-based prosecution history estoppel to a claim that existed in the original application and was allowed in its original form, with no amendment whatsoever. (Pet. App. 18a-19a).

The decision in Deering v. Vector means that the cancellation of a broad claim will almost always confine narrow claims to their literal scope, even if those claims were deemed allowable in the first PTO Office Action, and even if they were never amended.

The Court's Prior Rulings

This Court has examined the relationship between the doctrine of equivalents and prosecution history estoppel in Warner-Jenkinson v. Hilton Davis Chemical Co., 520 U.S. 17, 117 S. Ct. 1040 (1997) and again in Festo II. In both cases, the Court held that the doctrine of equivalents allows the patentee to prove infringement despite insubstantial alterations from the patented claim and that prosecution history estoppel acts as a check on that doctrine to ensure that the patentee cannot recapture the very subject matter surrendered. Both cases rejected bright-line tests (proposed by the petitioner in Warner-Jenkinson and adopted by the Federal Circuit in Festo I), and emphasized fairness to the public and patent owner over retroactively-applied and rigid rules. Warner-Jenkinson, 520 U.S. at 32 n. 6, 117 S. Ct. at 1050 n. 6 ("To change so substantially the rules of the game now could very well subvert the various balances the PTO sought to strike when issuing the numerous patents which have not yet expired and which would be affected by our decision"); Festo III, 535 U.S. at 739-40, 122 S. Ct. at 1841-42 (citing Warner-Jenkinson and reasoning that "[t]here

is no justification for applying a newer and more robust estoppel to those who relied on prior doctrine.").

This Court has never addressed the application of amendment-based prosecution history to claims that were substantively present and allowable in the original application, or the extension of that amendment-based estoppel to other claims in the patent.

REASONS FOR GRANTING THE PETITION

1. The Court Should Grant Certiorari To Clarify That Amendment-Based Estoppel Does Not Apply To Claims That Existed In Allowable Form Prior To Any Amendment.

As discussed above, Patent Claim 1 is Application Claim 3 rewritten in independent form. (JA109-10). Prior to the Deering v. Vector decision, established Federal Circuit precedent held that rewriting a dependent claim in independent form was not considered a substantive amendment. For example, in Insta-Foam Products, Inc. v. Universal Foam Systems, Inc., 906 F.2d 698 (Fed. Cir. 1990), the Federal Circuit held that prosecution history estoppel did not apply to a claim amended solely to rewrite it in independent form after the claim from which it depended was rejected. Id. at 703. In Insta-Foam, as here, the Examiner had rejected an independent Application Claim, noting that a dependent Application Claim was allowable if rewritten in independent form. Id. The Federal Circuit found that neither the effective abandonment of the independent claim, nor rewriting the dependent claim in independent form

gave rise to prosecution history estoppel.[6] Similarly, the court in Bloom Engineering Co. v. North American Manufacturing Co., 129 F.3d 1247 (Fed. Cir. 1997), held that rewriting a dependent claim in independent form is not a substantive change because "a dependent claim incorporates by reference all of the limitations of the claim from which it depends." Id. at 1250 (citing 35 U.S.C. § 112 ¶ 4).

The Federal Circuit's reasons for rejecting those precedents in Deering v. Vector are not stated. The decision states, without citation to any authority, that:

> While Deering argues that it merely rewrote an allowable original Claim 3 in independent form, there is no question that the claim was narrowed by the deletion of a broad original claim in favor of a claim that contained the Zero Position Limitation.

(Pet. App. at 18a (emphasis added)). Citing this Court's decision in Festo II, the Federal Circuit went on to find that the rewriting of Application Claim 3 as an independent claim "clearly disclaimed the territory between the original Claim 1 and the new Claim 1 as issued." Id.[7] The Court did not

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[6] At least one district court has held that Festo I and Builders Concrete, Inc. v. Bremerton Concrete Products Co., 757 F.2d 255 (Fed. Cir. 1985), does not apply when an applicant cancelled independent claims and amended a dependent claim to change it to independent form. Honeywell Int'l Inc. v. Hamilton Sundstrand Corp., No. Civ. A. 99-309 GMS, 2001 WL 66348, at *6 (D. Del. Jan. 8, 2001), appeal docketed, No. 02-10005 (Fed. Cir. 2002).

[7] This Court's Festo II decision did not rule that a cancellation of a broad claim surrenders all territory between that claim and narrower patent claims, much less that such territory was

identify which claim it asserted was narrowed. In fact, Application Claim 3 was never substantively changed, and Patent Claim 1 contains precisely the same language as Application Claim 3.

The Deering v. Vector decision presents exactly the risk identified by this Court in Festo II. Inventors who amend their claims under a regime in which rewriting a dependent claim in independent form was not considered a substantive change now find that those decisions dramatically narrowed the scope of that claim (and all other patent claims with similar language, whether or not amended, see § 2). In expressing concern with the narrow grounds for rebuttal allowed by the Federal Circuit's latest Festo III decision, the author of the Builders Concrete decision identified the problem:

> [I]t is customary to present broad and successively narrow claims, and to move elements between dependent and independent claims. The amici pointed out that such routine actions may now have unforeseeable consequences, and impose new pitfalls, costs and burdens on inventors.

Festo III, 344 F.3d at 1382 n. 2 (Newman, J. dissenting). A ruling that a claim identified as allowable by the Examiner is somehow restricted to its literal scope by virtue of a subsequent cancellation of a broader claim is clearly one such unforseeable consequence.

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surrendered after the narrower claim was deemed allowable by the Examiner.

2. The Court Should Grant Certiorari to Determine Whether An Amendment To One Claim Automatically Narrows The Range of Equivalents For All Claims With The Same Language

The Federal Circuit's decision that amendment-based prosecution history estoppel applies to all claims with similar language, whether or not amended, is based on its factually distinguishable and (until recently) rarely-followed decision in Builders Concrete, Inc. v. Bremerton Concrete Products Co., 757 F.2d 255 (Fed. Cir. 1985). That case, which arguably reached the right result on its facts, was never meant to support the broad proposition for which it is cited for in Deering v. Vector, as shown by the author's own subsequent warnings about combining the Festo decision with the Builders Concrete ruling.

An understanding of the argument requires an analysis of the facts leading to the Builders Concrete decision. In Builders Concrete, Application Claim 1 was rejected and then amended (not cancelled) to include limitations from two different Application Claims. Id. at 259-60. Thus, Amended Application Claim 1 was a new claim, different in scope from any claim filed in the original application. Those three claims (the Amended Claim and the two claims whose limitations were added to create the Amended Claim) were discussed as a package in a personal interview with the Examiner. Id. The record of that interview states that, after discussion, all three claims were deemed allowable, creating the strong inference that the Examiner had been convinced to allow both the Amended and Unamended Claims on the basis of that interview. Id. The Builders Concrete court ruled that, under the circumstances, the patent owner was estopped from asserting the doctrine of equivalents for the element added to the Amended Claim because it was clear from the prosecution

history that allowance of the claim depended on inclusion of that claim element. Id. It is not at all clear whether the Builders Concrete decision was based on argument-based estoppel or amendment-based estoppel, and Builders Concrete cited no authority for the application of amendment-based estoppel to unamended claims. Id.

Given the sweeping potential of this ruling, it was cited in surprisingly few cases, and its breadth was later questioned by its author. In Intermatic, Inc. v. Lamison & Sessions Co., 273 F.3d 1355 (Fed. Cir. 2001) (holding that amendment-based prosecution history estoppel resulting from a reexamination amendment applies to all other claims containing the limitation), Judge Newman cautioned in dissent that her opinion in Builders Concrete should not be combined with the bright-line test of Festo I to result in sweeping limitations to the doctrine of equivalents. Intermatic, 273 F.3d at 1370 (Newman, J. dissenting-in-part).[8]

Judge Newman's comments are equally relevant to the Deering v. Vector decision. The Federal Circuit has narrowed the methods of rebutting the presumption of prosecution history estoppel to one factual argument (that the equivalent was not technically available to be included at the time of the patent), and two legal arguments (that the patentee was otherwise prevented from describing the alleged equivalents when it narrowed the claim or that a narrowing amendment was "tangential.") Festo III, 344 F.3d at 1369.

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[8] The Intermatic decision, which relied on the Federal Circuit's Builders Concrete and this Court's Festo I decisions as controlling factors, has been vacated and remanded for further consideration based on this Court's Festo II ruling. Intermatic, 537 U.S. 1016 , 1016, 123 S. Ct. 549 1549 (2002).

In Deering v. Vector, the Federal Circuit appears to have ruled that an amendment to rewrite a claim as independent is not "tangential," and Deering is not aware of any court ruling finding that any amendment deemed narrowing is actually "tangential." The result of this ruling is that the presumption of prosecution history estoppel is difficult if not impossible to rebut in an area of mature technology.

While Deering has no standing to challenge the Federal Circuit's most recent Festo III opinion, read together with Deering v. Vector it results in the very problem identified by Judge Newman -- sweeping limitations to the doctrine of equivalents that were unforeseeable and unintended. Even Vector's own counsel, an experienced patent practitioner, conceded at oral argument that one would not expect an independent claim deemed allowable by the Examiner to be later stripped of all equivalents based on a rejection of another independent claim. (Transcript of Fed. Cir. Oral Arg.). Applying Builders Concrete as broadly as suggested in the Federal Circuit's opinion, in combination with the ever-more-narrow rebuttable presumption of Festo III, will inevitably restrict the scope of virtually every existing patent. The Federal Circuit's ruling will penalize any patent owner who has chosen to follow the common patent practice of attempting to assert broad claims but settling for more narrow claims for reasons of timing or cost. There is no support in the case law, or in logic, for applying amendment-based estoppel to every unamended claim with the same or similar language.

CONCLUSION

Granting this petition for certiorari would afford this Court the opportunity to review the unintended consequences of the coupling of its Festo II decision with the Federal

Circuit's Builders Concrete decision. Additionally, it would provide this Court its first opportunity to address the application of amendment-based prosecution history to claims that were substantively present and allowable in the original application, or the extension of that amendment-based estoppel to other claims in the patent.

Respectfully Submitted,

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APPENDIX A

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

Nos. 02-1013, -1197

[Filed October 17, 2003]

DEERING PRECISION INSTRUMENTS, L.L.C.,
Plaintiff-Appellant,

v.

VECTOR DISTRIBUTION SYSTEMS, INC.
and GRAM PRECISION SCALES, INC.,
Defendants-Cross Appellants,

and

MOHAN THADANI,
Defendant,

and

BONSO ELECTRONICS INTERNATIONAL, INC.,
Defendant.

Appealed from United States District Court
for the Northern District of Illinois
Senior Judge Harry D. Leinenweber

Before BRYSON, GAJARSA, and PROST, Circuit Judges.

OPINION

GAJARSA, Circuit Judge.

Deering Precision Instruments, L.L.C. ("Deering") appeals from the judgment issued by the United States District Court for the Northern District of Illinois granting summary judgment to Vector Distribution Systems, Inc., Gram Precision Scales, Inc., Bonso Electronics International, Inc., and Mohan Thadani (collectively "Vector") of noninfringement of *United States Patent No. 4,744,428* (the "'428 patent"). *Deering Precision Instruments, L.L.C. v. Vector Distrib. Sys., Inc.*, 2001 U.S. Dist. LEXIS 13931, No. 01-C-1118 (N.D. Ill. Aug. 31, 2001). Vector cross-appeals the district court's denial of its motion for attorney fees. We affirm the district court's grant of summary judgment of no literal infringement. We vacate the district court's grant of summary judgment of no infringement under the doctrine of equivalents and remand for further proceedings consistent with this opinion. We affirm the district court's denial of Vector's motion for attorney fees.

I. BACKGROUND

A. Prosecution History of the '428 Patent

The '428 patent, issued to David Knotter, Donald Levin, and Jody Numbers, and assigned to Deering, is directed to a compact, light-weight, pocket-type scale capable of accurately weighing substances up to ten grams. The '428 patent issued on May 17, 1988 and has five claims, claims 1, 3, and 4 being in independent form. Claims 1, 2, 4, and 5 are at issue

in the present action. Representative claim 1 recites as follows:

> 1. A lightweight portable scale comprising a base, a beam having a substance holder at one end thereof and a scale extending toward the opposite end thereof, a sliding weight movably carried by said beam for movement along said scale, a pair of metallic fulcrum posts projecting upwardly from said base, and a pair of metallic bearing inserts in said beam for cooperation with said fulcrum posts, one pair of the pair of posts or the pair of inserts having pointed projections thereon receivable in tapered recesses in the other pair for positioning and pivotally supporting said beam, said sliding weight being movable from a zero position to a position near the said opposite end of the beam and said sliding weight when in its zero position having a portion thereof disposed substantially in an imaginary plane containing the fulcrum of the beam, whereby to minimize the weight of the substance holder required to balance the beam when the sliding weight is in its zero position.

'428 patent, col. 6, ll. 12-30 (emphasis added).

Generally, the scale of the '428 patent functions as any normal balance-type scale. As shown in Figure 2 of the '428 patent below, the scale has a bottom portion 14 that serves as a base for a weighing mechanism 17. *Id.* at col. 2, ll. 64-65. The weighing mechanism comprises a balance beam 18 mounted for pivotal movement on a pair of fulcrum posts 21. *Id.* at col. 3, ll. 3-8. The fulcrum posts are adapted to cooperate with bearing inserts 24 in the balance beam. The balance beam has a material holder 32, or tray, on one side of

the fulcrum and adjustable sliding weights 34 and 35 on the opposite side of the fulcrum. *Id.* at col. 3, ll. 46-57. In operation, the weights are moved to balance the beam.

See Foldout Exhibit
Figure 2

An important aspect of the invention is the minimization of the overall size and weight of the scale while maintaining the ability to weigh materials up to 10 grams.

See Foldout Exhibit
Figure 5

To accomplish this, the inventors designed sliding weight 35 to minimize the overall weight of the scale by moving the center of mass of the sliding weight closer to the plane created by the fulcrums of the scale. Figure 5 of the '428 patent above shows the sliding weight 35 in its zero position, i.e., the position where the beam balances without any material in the holder.

The written description provides that the sliding weight 35 be constructed in such a manner that:

> the heavy metallic insert 44 therein is offset from the pointer 37 of the weight in the direction of the fulcrum 19 for the balance beam 18. Indeed, the metallic insert 44 is offset to an extent that when the coarse sliding weight 35 is in its zero position, adjacent the cross-bar portion 27 of balance beam 18, the metallic insert is disposed substantially in the plane of the fulcrum 19, i.e. the imaginary vertical plane containing the center lines of the fulcrum posts 21 and 22. With the center of insert 44 aligned precisely in the plane of fulcrum

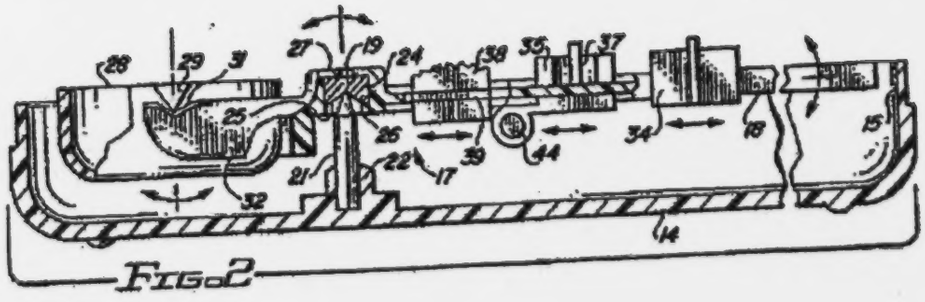
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FIG. 2

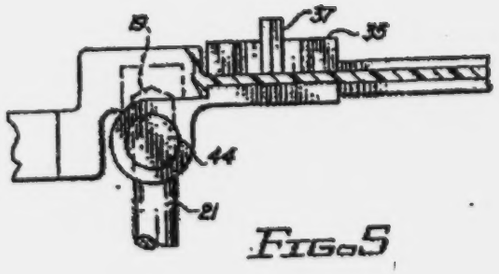
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FIG. 5

> 19 the insert becomes essentially neutral so far as balance of the balance beam 18 and the holder 28 are concerned when the weight 35 is in its zero position and the holder 28 is empty. This greatly minimizes the amount of mass that must be incorporated into the holder 28 portion of the weighing mechanism 17.

Id. at col. 5, ll. 12-29 (emphases added).

The application filed with the United States Patent and Trademark Office ("PTO") that matured as the '428 patent initially contained ten claims, claims 1 and 9 being in independent form. Original independent claim 1 defined a light-weight portable scale having a base, a beam with a substance holder at one end and a scale extending in an opposite direction, a sliding weight movably carried by the beam for movement along the scale, a pair of metallic fulcrum posts projecting upwardly from the base, and a pair of metallic bearing inserts in the beam for cooperation with the fulcrum posts.

Original independent claim 9 was similar to original independent claim 1, with the additional limitation that when the sliding weight is in the zero position, a portion of the sliding weight was "disposed substantially in an imaginary plane containing the fulcrum of the beam." The parties refer to this limitation as the "Zero Position Limitation."

Original claim 3, dependent on claim 1, similarly included the Zero Position Limitation:

> 3. The portable scale of Claim 1 further characterized in that said sliding weight is movable from a zero position to a position near the said opposite end of the beam and <u>said sliding weight when in its zero position</u>

> has a portion thereof disposed substantially in an imaginary plane containing the fulcrum of the beam, whereby to minimize the weight of the substance holder required to balance the beam when the sliding weight is in its zero position.

(emphasis added.) The Zero Position Limitation was thus the only additional limitation in dependent claim 3.

After review of the application, the PTO rejected claims 1, 2, and 5-7 under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 4,050,531 in view of U.S. Patent No. 3,082,833. The PTO objected to claims 3, 4, and 8-10, but indicated that they would be allowable if rewritten in independent form.

The applicants filed a response to the rejection deleting original claims 1 and 3. They submitted new claim 11, which was original claim 3 rewritten in independent form. With respect to original claim 9, which had not been rejected, the applicants stated:

> It is believed that the Examiner must have overlooked the fact that Claim 9 is an independent base claim and that Claim 10 is dependent only from Claim 9. Claim 9 calls for a "sliding weight when in its zero position having a portion thereof disposed substantially in an imaginary plane containing the fulcrum of the beam." This feature is not disclosed in the references. It is therefore believed that Claims 9 and 10 are allowable as written.

(emphasis added.)

The PTO subsequently issued the patent on May 17, 1998. Claim 11 issued as independent claim 1 and original claim 9 issued as claim 4.

B. Alleged Infringing Product

Vector manufactures and sells the accused device, its own version of a pocket-size scale, the VX-10. The VX-10 is shown in Figures 1 and 2 below.

SEE FOLD OUT EXHIBIT
FIGURES 1 AND 2

The VX-10 has two slidable weights 10 and 20, each of which is movable along the balance beam 30 of the scale. The metallic insert of the sliding weight 20 is positioned directly beneath the pointer. The sliding weights of the VX-10, when in their respective "zero positions" have no portion extending into the imaginary plane containing the fulcrum 40. At its "zero position," the sliding weights 10 and 20 of the VX-10 are no closer than 0.10 inches from the imaginary plane 60 containing the fulcrum 40. The VX-10 has an additional stationary counterweight 70 affixed to the substance holder support member 55. This additional counterweight balances the scale in the zero position as opposed to the '428 patent, which places the majority of the center of mass of the weight substantially in the plane of the fulcrum. The additional counterweight 70 coupled with the placement of the sliding weights 10 and 20 outside the plane containing the fulcrum are the decisive design differences between the VX-10 and the '428 patent for the purposes of this action.

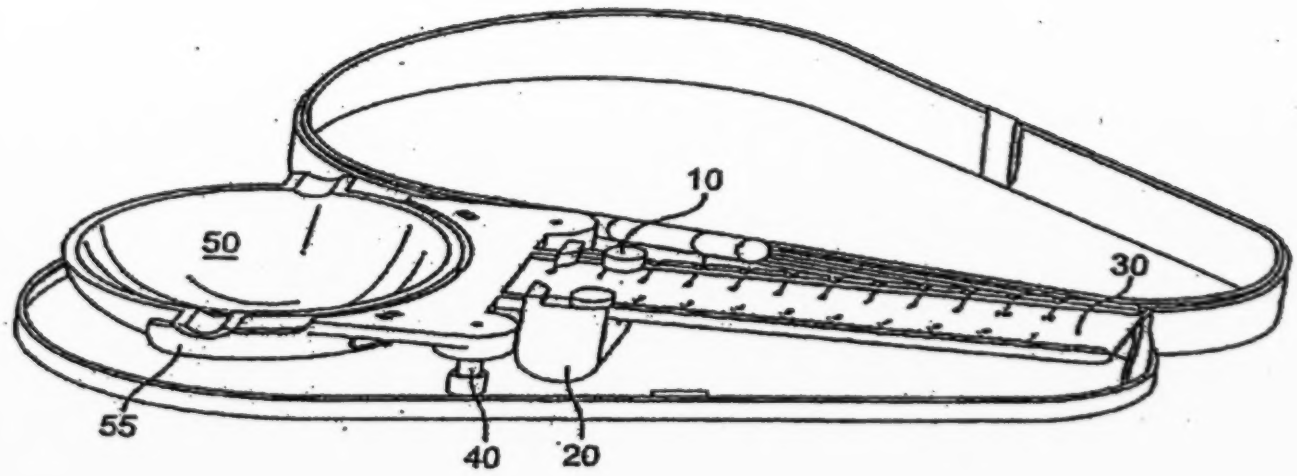

FIG. 1

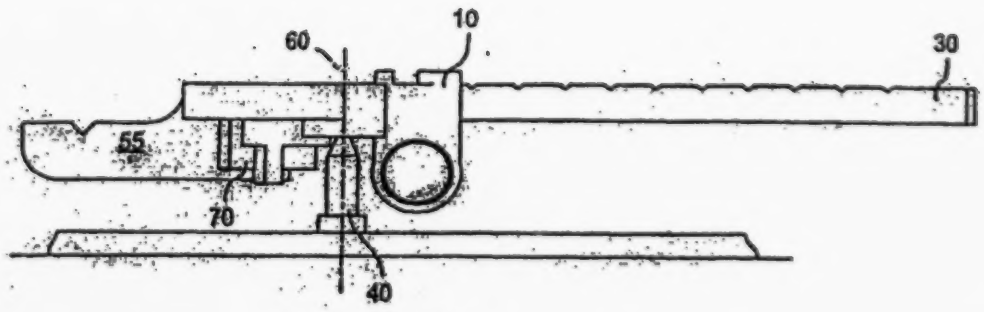

FIG. 2

C. Procedure Before the United States District Court

In 2001, Deering discovered Vector was selling a pocket-size scale and sued Vector for infringement. In its action, Deering sought an injunction and damages for the sale of the VX-10, alleging that the VX-10 infringed claims 1, 2, 4, and 5 of the '428 patent. Vector filed its Answer and Counterclaim on April 24, 2001 and a motion for summary judgment of noninfringement on May 25, 2001.

In connection with the summary judgment motion, Vector conceded that the VX-10 met each and every limitation of the asserted claims except for the Zero Position Limitation. The district court did not conduct a separate *Markman* hearing, but construed that particular limitation "to mean that the weight must enter and penetrate the imaginary plane containing the fulcrum of the beam." In arriving at this construction, the district court relied on the intrinsic evidence of the '428 patent, including the claims and the written description, as well as the ordinary meaning of the term "substantially." The district court specifically stated:

> In common usage, "substantially" means significantly or considerably. In the claims at issue, the word "substantially" describes how the weight is "disposed" in the "imaginary plane." The specification sheds further light on the proper construction when, in reference to the relationship between the weight and the imaginary plane, it states that the metallic insert "rests essentially in the plane of the fulcrum for the balance beam." . . . Thus, the court construes the element requiring the sliding weight to be "disposed substantially in an imaginary plane containing the fulcrum" to mean that the weight must enter and

penetrate the imaginary plane containing the fulcrum of the beam.

In light of this claim construction, the district court determined that the VX-10 did not literally infringe any of the asserted claims of the '428 patent. Specifically, the district court held, "[a]s Deering does not argue that any portion of the weight in Vector's scale enters the plane of the fulcrum, there cannot be literal infringement."

The district court also held that because the applicants amended the Zero Position Limitation during prosecution by deleting original claim 1, this court's decision in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558 (Fed. Cir. 2000) (*en banc*) ("*Festo I*"), *vacated by* 535 U.S. 722, 122 S. Ct. 1831, 152 L. Ed. 2d 944 (2002) ("*Festo II*"), bars any equivalents for the Zero Position Limitation for every asserted claim. The district court recognized that independent claim 4 and dependent claim 5 were not amended during prosecution, but nevertheless determined Deering was barred from asserting the doctrine of equivalents for claims 4 and 5 because of this court's decision in *Builders Concrete, Inc. v. Bremerton Concrete Products Co.*, 757 F.2d 255 (Fed. Cir. 1985). The district court held that prosecution history estoppel applies to any limitation narrowed during prosecution in all claims in the patent regardless of whether the limitation is present in a claim that itself was never amended.

After Vector obtained summary judgment, it moved for an award of attorney fees pursuant to 35 U.S.C. § 285. Vector argued that Deering failed to consult with a patent attorney to properly evaluate the prosecution history and that the purpose of the litigation was to harass, intimidate, or financially undermine Vector. The district court determined that failure to obtain advice of intellectual property counsel with respect

to infringement under the doctrine of equivalents was not per se gross negligence and also determined that Deering's conduct was "far from harassing, intimidating, or overbearing behavior." Accordingly, the district court denied Vector's motion.

Both parties timely appealed to this court and we have jurisdiction pursuant to 28 U.S.C. § 1295(a)(1).

II. DISCUSSION

We review the grant of summary judgment de novo, drawing all factual inferences in favor of the nonmoving party. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 106 S. Ct. 2505, 91 L. Ed. 2d 202 (1986); *Moore U.S.A., Inc. v. Standard Register Co.*, 229 F.3d 1091, 1105 (Fed. Cir. 2000). Claim construction is a question of law subject to de novo review on appeal. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc).

The determination of whether a case is exceptional and thus eligible for an award of attorney fees under 35 U.S.C. § 285 is a factual determination reviewed for clear error. *Superior Fireplace Co. v. Majestic Prods. Co.*, 270 F.3d 1358, 1376 (Fed. Cir. 2001). The subsequent determination of whether attorney fees are appropriate is reviewed for an abuse of discretion. *Id.*

An infringement analysis, whether literal or under the doctrine of equivalents, requires two steps: (1) construction of the claims to determine the scope and meaning of the asserted claims; and (2) comparison of the properly construed claims with the allegedly infringing device. *Cybor*, 138 F.3d at 1454.

A. Claim Construction

In construing the claims of a patent, we review the intrinsic evidence, which consists of the specification and the prosecution history. *Interactive Gift Express, Inc. v. Compuserve, Inc.*, 256 F.3d 1323, 1329 (Fed. Cir. 2001). Claim construction analysis begins with the ordinary meaning of the disputed claim term. *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1206 (Fed. Cir. 2002); *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Generally speaking, we indulge a "strong presumption" that a claim term carries its ordinary and customary meaning. *Tate Access Floors, Inc. v. Interface Architectural Res., Inc.*, 279 F.3d 1357, 1369 (Fed. Cir. 2002).

The next step is to review the written description and the prosecution history, to determine if the patentee has chosen to be his or her own lexicographer, or when the claim language itself lacks sufficient clarity to ascertain the scope of the claims. *Prima Tek II, L.L.C. v. Polypap S.A.R.L.*, 318 F.3d 1143, 1148 (Fed. Cir. 2003); *Ecolab, Inc. v. Envirochem, Inc.*, 264 F.3d 1358, 1366 (Fed. Cir. 2001); *Gart v. Logitech*, 254 F.3d 1334, 1339-40 (Fed. Cir. 2001).

In the present appeal, Deering contests the district court's construction of the Zero Position Limitation: "said sliding weight when in its zero position having a portion thereof disposed substantially in an imaginary plane containing the fulcrum of the beam." The Zero Position Limitation is present in every claim at issue in this action. In particular, Deering objects to the construction of the terms "substantially in an imaginary plane." It specifically contends that the term "substantially" means "at or near."

This court is asked, once again, to construe the meaning of the term "substantially" in a patent claim. *See, e.g., Epcon Gas Sys., Inc. v. Bauer Compressors, Inc.*, 279 F.3d 1022 (Fed. Cir. 2002) (construing the terms "substantially constant" and "substantially below"); *Zodiac Pool Care, Inc. v. Hoffinger Indus., Inc.*, 206 F.3d 1408 (Fed. Cir. 2000) (construing the term "substantially inward"); *York Prods., Inc. v. Cent. Tractor Farm & Family Ctr.*, 99 F.3d 1568 (Fed. Cir. 1996) (construing the term "substantially the entire height thereof"); *Tex. Instruments Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558 (Fed. Cir. 1996) (construing the term "substantially in the common plane"). In conducting this analysis, we begin with the ordinary meaning of the claim terms to one of ordinary skill in the art. *Prima Tek,* 318 F.3d at 1148. Reference to dictionaries and our cases indicates that the term "substantially" has numerous ordinary meanings. As the district court stated, "substantially" can mean "significantly" or "considerably." The term "substantially" can also mean "largely" or "essentially." *Webster's New 20th Century Dictionary* 1817 (1983). Indeed, our cases recognize the dual ordinary meaning of this term as connoting a term of approximation or a term of magnitude. *See Epcon,* 279 F.3d at 1031 ("The phrase 'substantially constant' denotes language of approximation, while the phrase 'substantially below' signifies language of magnitude, i.e., not insubstantial.").

Since the term "substantially" is capable of multiple interpretations, we turn to the intrinsic evidence to determine which interpretation should be adopted. *Ecolab*, 264 F.3d at 1366; *Gart*, 254 F.3d at 1339-40.

As is often the case, the written description does not explicitly identify the meaning of the term "substantially." The specification does, however, provide the public with a

significant explanation of the criticality of the location of the sliding weight in conjunction with the plane created by the fulcrum so as to support a finding that the term "substantially" is a term of magnitude as opposed to approximation. First, the stated object of the '428 patent is to provide a lightweight, portable scale. The written description plainly states:

> To hold down on the mass of the substance holder portion of the mechanism required to achieve equilibrium of the mechanism the sliding weight is constructed in such a manner that the metallic insert therein rests essentially in the plane of the fulcrum for the balance beam when the sliding weight is in its zero position.

'428 patent, col. 1, ll. 48-54 (emphasis added). Figure 5, *supra*, shows an example of the position of the sliding weight that meets the limitation. In Figure 5, the metal insert of the sliding weight is precisely in the plane, as the written description states:

> With the center of insert 44 aligned precisely in the plane of fulcrum 19 the insert becomes essentially neutral so far as balance of the balance beam 18 and the holder 28 are concerned when the weight 35 is in its zero position and the holder 28 is empty. This greatly minimizes the amount of mass that must be incorporated into the holder 28 portion of the weighing mechanism 17.

Id. at col. 5, ll. 12-29 (emphasis added). The placement of a portion of the weight in the plane of the fulcrum is the stated structural orientation that provides the benefits of minimization of weight and portability. The preferred

embodiment places the center of the insert—clearly the major contributor to the total mass of the weight—precisely in the plane. We, however, do not generally limit claims to the preferred embodiment. *Comark Communications, Inc. v. Harris Corp.*, 156 F.3d 1182, 1187 (Fed. Cir. 1998). This is particularly significant because the claim language does not contain the explicit requirement that the metal insert of the weight be "essentially in the plane" containing the fulcrum.

It is proper, however, to construe the term "substantially in the plane" in light of the specification. *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003) ("Claims are interpreted in light of the specification and with the knowledge of one of ordinary skill in the art."); *Vitronics*, 90 F.3d at 1582. The written description, as a whole, clearly requires that a portion of the metal insert of the weight penetrate the imaginary plane containing the fulcrum of the beam to minimize the weight of the scale and facilitate portability. There is no disclosure suggesting that a portion of the weight need only be located at or near the plane as Deering suggests. For this reason, we agree *in part* with the district court's construction of the Zero Position Limitation as requiring at least a portion of the weight to intersect the plane containing the fulcrum. We agree with the district court's claim construction only in part because the district court's construction effectively reads the term "substantially" out of the claims by construing the claim to read on any slight penetration of the plane. This error, however, is harmless because, as discussed above, the term "substantially" is a term of magnitude requiring a "not insubstantial" portion of the weight to intersect the plane containing the fulcrum. *Epcon*, 279 F.3d at 1031. Because this construction is actually narrower than the district court's construction, it does not affect the district court's ultimate finding of noninfringement with respect to the VX-10. Accordingly, in light of the

ordinary meaning of the term "substantially" and in view of the written description, we construe the Zero Position Limitation as requiring a not insubstantial portion of the weight to intersect the plane containing the fulcrum.

On appeal, Deering argues that the term "substantially in" means "at or near the imaginary plane." Deering argues that any other interpretation reads the term "substantially," one of approximation, out of the claim. As discussed above, the term "substantially" in this context is used as a term of magnitude, describing the extent of the portion of the weight in the plane defined by the fulcrum, not as a term of approximation.

B. Infringement

The second step of the infringement analysis requires comparison of the accused device to the properly construed claims. *Cybor*, 138 F.3d at 1454. To prove infringement, the patentee must show that the accused device meets each claim limitation, either literally or under the doctrine of equivalents. *Seal-Flex, Inc. v. Athletic Track & Court Constr.*, 172 F.3d 836, 842 (Fed. Cir. 1999).

With respect to literal infringement, it is clear that the VX-10 does not literally meet each limitation of any of the asserted claims 1, 2, 4, and 5 of the '428 patent. In particular, the accused device does not penetrate the imaginary plane *at any point*, and therefore does not literally infringe the asserted claims of the '428 patent. Deering admits this by arguing that the placement of the weight 0.10 inches away from the plane amounts to literal infringement. In short, because no portion of the weight of the VX-10 is "substantially in" the plane under either the district court's or our narrower construction, the VX-10 cannot literally infringe the claims of the '428 patent.

With respect to the doctrine of equivalents, the district court relied on this court's holding in *Festo I* to determine that Deering was estopped from asserting infringement under the doctrine of equivalents. *Festo I* was vacated by the Supreme Court in *Festo II*. Accordingly, we vacate the district court's finding of no infringement under the doctrine of equivalents based on *Festo I* and address whether prosecution history estoppel, as discussed in the Supreme Court's decision in *Festo II*, and this court's opinion on remand, *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 344 F.3d 1359, 2003 U.S. App. LEXIS 19867, F.3d . (Fed. Cir. Sept. 26, 2003) (en banc) ("*Festo III*"), is applicable to the claims at issue.

The parties dispute whether prosecution history estoppel applies to Deering's allegations of infringement under the doctrine of equivalents. There are two distinct theories that fall under the penumbra of prosecution history estoppel—amendment-based estoppel and argument- based estoppel. *Elkay Mfg. Co. v. Ebco Mfg. Co.*, 192 F.3d 973, 979 (Fed. Cir. 1999) (holding that the scope of coverage of the claims may change if a patentee has "relinquished [a] potential claim construction in an amendment to the claim or in an argument to overcome or distinguish a reference"). In general, prosecution history estoppel, under either theory, requires that patent claims be interpreted in light of the proceedings before the PTO. *Festo II*, 535 U.S. at 733.

1. Amendment-based Estoppel

With respect to amendment-based estoppel, "a narrowing amendment made to satisfy any requirement of the Patent Act may give rise to an estoppel." *Id.* at 736. "A patentee's decision to narrow his claims . . . may be presumed to be a general disclaimer of the territory between the original claim

and the amended claim." *Id.* at 740. When the patentee originally claimed the subject matter alleged to infringe but then narrowed the claim in response to a rejection, "courts may presume the amended text was composed with awareness of this rule and that the territory surrendered is not an equivalent of the territory claimed. In those instances, however, the patentee must show that at the time of the amendment one skilled in the art could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent." *Id* at 741. This can be shown by one of the following three criteria: (1) the equivalent may have been unforeseeable at the time of the amendment; (2) the rationale underlying the amendment may bear no more than a tangential relation to the equivalent in question; or (3) there may be some other reason suggesting that the patentee could not reasonably be expected to have described the insubstantial substitute in question. *Festo III*, _____ F.3d at ___.

As an initial note, the only asserted independent claim that is arguably subject to a narrowing amendment during prosecution is issued claim 1. This claim, filed as claim 11, essentially incorporated original claim 1 and original dependent claim 3. Original claim 9 was not amended during prosecution and issued as independent claim 4 in unamended form. In response to the first Office Action rejecting claim 1 under 35 U.S.C. § 103(a) and objecting to claim 3 because it depended from rejected claim 1, the applicants deleted claims 1 and 3 and added new independent claim 11.

Deering's addition of independent claim 11, coupled with the clear surrender of the broader subject matter of the deleted original independent claim presumptively bars Deering from arguing infringement under the doctrine of equivalents. As the Supreme Court noted, the correct focus is on whether

amendment surrendered subject matter that was originally claimed for reasons related to patentability. *Festo II*, 535 U.S. at 736. Here, the patentees clearly disclaimed the territory between the original claim 1 and new claim 1 as issued. *Id.* at 740. Original claim 1 claimed "a sliding weight movably carried by said beam for movement along said scale." In response to the examiner's rejection under 35 U.S.C. § 103(a), the applicants deleted original claims 1 and 3 and settled for claims containing the narrower requirement that a portion of the sliding weight be disposed substantially in a plane defined by the fulcrums originally present in claim 3. The territory between the sliding weight limitation of original claim 1 and the Zero Position Limitation was thus surrendered by the patentees. *See Pioneer Magnetics, Inc. v. Micro Linear Corp.*, 330 F.3d 1352, 1357 (Fed. Cir. 2003).

In *Festo II*, the Supreme Court stated "estoppel arises when an amendment is made to secure the patent and the amendment narrows the patent's scope." *Id.* at 736. Accordingly, we hold that because Deering narrowed the Zero Position Limitation for reasons related to patentability, the presumption of prosecution history estoppel set forth by the Supreme Court in *Festo II* applies to independent claim 1 and dependent claim 2.

While Deering argues that it merely rewrote an allowable original claim 3 in independent form, there is no question that the claim was narrowed by the deletion of a broad original claim in favor of a claim that contained the Zero Position Limitation. Because the amendment in this case is not "truly cosmetic," estoppel presumptively applies. *Id.* at 736-37.

Additionally, this presumption applies to all claims containing the Zero Position Limitation, regardless of whether the claim was, or was not, amended during prosecution.

Builders Concrete, 757 F.2d at 260 (holding that prosecution history estoppel applies to a claim containing a limitation that was allowed as originally filed based on the addition of the same limitation in a separate claim). Here, as in *Builders Concrete*, independent claim 4 contained the disputed limitation and was never amended during prosecution. Nevertheless, it is clear from the prosecution history that the allowance of claim 1, the broadest claim, depended on the amendment narrowing the Zero Position Limitation to that of a dependent claim. Since independent claim 4 and dependent claim 5 contain the Zero Position Limitation, prosecution history estoppel presumptively applies equally to those claims. *Id.* "To hold otherwise would be to exalt form over substance and distort the logic of this jurisprudence, which serves as an effective and useful guide to the understanding of patent claims." *Id.*

The remaining question is whether Deering can rebut the *Festo II* presumption. This question is better addressed in the first instance by the district court. *Schwing GMBH v. Putzmeister Aktiengesellschaft*, 305 F.3d 1318, 1329 (Fed. Cir. 2002) (remanding the rebuttal of a *Festo II* presumption to the district court for a determination in the first instance). Accordingly, we remand the rebuttal issue to the district court for further proceedings consistent with this opinion and with this court's en banc decision in *Festo III*.

2. Argument-based Estoppel

With respect to argument-based estoppel, Vector contends that arguments made during prosecution estop Deering from asserting infringement under the doctrine of equivalents. "To invoke argument-based estoppel, the prosecution history must evince a 'clear and unmistakable surrender of subject matter.'" *Eagle Comtronics, Inc. v. Arrow Communication*

Labs., Inc., 305 F.3d 1303, 1316 (Fed. Cir. 2002) (quoting *Pharmacia & Upjohn Co. v. Mylan Pharms., Inc.*, 170 F.3d 1373, 1376-77 (Fed. Cir. 1999)).

As described above, the Examiner *objected* to original claim 9 and indicated its allowability if rewritten in independent form although original claim 9 was *already in independent form*. In response, the applicants noted the Examiner's mistake and restated the Zero Position Limitation as not being disclosed in the references of record. This statement is merely a clarification of the Examiner's mistake, not the "clear and unmistakable surrender of subject matter" required by this court in *Eagle Comtronics*. Accordingly, we hold that argument- based estoppel was not a proper basis for applying prosecution history estoppel. Upon remand, should Deering adequately rebut the presumption discussed above, Deering shall not be estopped from arguing that the VX-10 infringes claim 4 of the '428 patent based on *arguments* made in prosecution.

C. Cross-appeal

Finally, on cross-appeal Vector argues that the district court committed clear error when it declined to consider the case exceptional for the purpose of awarding attorney fees under 35 U.S.C. § 285. It argues that Deering was grossly negligent in failing to consult the prosecution history prior to bringing this action. Moreover, Vector also argues that Deering brought this lawsuit for purposes of harassment. The district court addressed each of these arguments in its decision, and we review the district court's exceptionality determination for clear error. *Superior Fireplace*, 270 F.3d at 1376. Because it was not clearly erroneous for the district court to find the case unexceptional, Vector's argument must fail. Without the initial finding of an exceptional case, there

can be no abuse of discretion by the district court in denying attorney fees. *Id.* We therefore affirm the district court's finding that this was not an exceptional case.

III. CONCLUSION

For the foregoing reasons, we hold that Vector was properly granted summary judgment of no literal infringement of the '428 patent. We vacate the district court's grant of summary judgment of no infringement under the doctrine of equivalents and remand for further proceedings in light of the Supreme Court's decision in *Festo II* and this court's decision in *Festo III*. Lastly, we affirm the district court's denial of attorney fees.

AFFIRMED-IN-PART, VACATED-IN-PART, AND REMANDED.

IV. COSTS

Each party to bear its own costs.

APPENDIX B

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

Case No. 01 C 1118

[Filed August 31, 2001]

DEERING PRECISION INSTRUMENTS, L.L.C., Plaintiff,	)
v.	)
VECTOR DISTRIBUTION SYSTEMS, INC., GRAM PRECISION SCALES, INC., BONSO ELECTRONICS INTERNATIONAL, INC. and MOHAN THADANI, Defendants.	)

Judge Harry D. Leinenweber

MEMORANDUM OPINION AND ORDER

Deering Precision Instruments, LLC ("Deering") owns United States Patent No. 4,744,428 (the "'428 Patent") for a lightweight portable scale that is small enough to be carried in a person's pocket. In its complaint, Deering alleges that Bonso Electronics International, Inc. ("Bonso") manufactures

a pocket scale, the "VX-10," for Vector Distribution Systems, Inc. ("Vector") and its alleged alter ego Gram Precision Instruments ("Gram") that infringes the 428 Patent. Deering alleges that Bonso infringed its patent, contributed to infringement by its co-defendants, and/or induced infringement by others. Before the court is Vector's Motion for Summary Judgment of Noninfringement.

BACKGROUND

The '428 Patent was issued to Deering on May 1, 1988. Generally, the patent discloses a lightweight portable scale with sliding weights and an associated carrying case. The '428 Patent has five claims, and Deering alleges that the defendants infringe Claims 1, 2, 4 and 5. For the purpose of this Motion for Summary Judgment, only one element of those claims is at issue. Claim 1 states as follows:

> A lightweight portable scale comprising a base, a beam having a substance holder at one end thereof and a scale extending toward the opposite end thereof, a sliding weight movably carried by said beam for movement along said scale, a pair of metallic fulcrum posts projecting upwardly from said base, and a pair of metallic bearing inserts in said beam for cooperation with said fulcrum posts, one pair of the pair of posts or the pair of inserts having pointed projections thereon receivable in tapered recesses in the other pair for positioning and pivotally supporting said beam, said sliding weight being movable from a zero position to a position near the said opposite end of the beam and *said sliding weight when in its zero position having a portion thereof disposed substantially in an imaginary plane containing the fulcrum of the beam, whereby to minimize the weight*

of the substance holder required to balance the beam when the sliding weight is in its zero position.

'428 Patent, col. 6: 12-30 (emphasis added). Claim 2 is dependent on Claim 1. Claim 4 is an independent claim that contains the same zero position limitation, and Claim 5 is dependent on Claim 4.

The following facts are taken from the parties' fact statements and are undisputed. The '428 Patent was filed as U.S. Patent Application No. 06/912,912 on September 29, 1986, by David G. Knotter, Donald Levin, and Jody L. Numbers (the "applicants"). (Defendant's Stmt. Facts, at ¶ 3.) The original application contained ten claims, and Claims 1 and 9 were independent claims. (*Id.* at ¶ 4.) On April 24, 1987, the U.S. Patent and Trademark Office (the "USPTO") issued an office action that rejected Claims 1, 2, and 5-7 as obvious under 35 U.S.C. § 103 and objected to Claims 3, 4, and 8-10 as being dependent upon a rejected base claim. (*Id.* at ¶¶ 8, 9.) In response to the office action, the applicants filed an amendment, that, among other things, canceled original Claim 1 and submitted original independent Claim 11. (*Id.* at ¶¶ 13-15.) The examiner issued a Notice of Allowability on January 13, 1988, allowing original Claims 4 and 9-12. (*Id.* at ¶ 21.) Original independent Claim 11 eventually issued as patent Claim 1. (*Id.*) In that claim, the language stating that the sliding weight, when in its zero position, has a portion thereof "disposed substantially in an imaginary plane containing the fulcrum of the beam, whereby to minimize the weight of the substance holder required to balance the beam when the sliding weight is in its zero position" was added by the Amendment to obtain allowance of the claim. (*Id.* at ¶¶ 24, 25.)

Vector's VX-10 scale has two slidable weights that are movable along the balance beam of the scale, and the larger of the weights contains a metallic insert. (*Id.* at ¶¶ 28, 29.) The VX-10 has an additional fixed weight on the substance holder that increases the weight. (*Id.* at ¶ 31.) Further, when each slidable weight in is its zero position, no part of any of them extend into the imaginary plane of the fulcrum. (*Id.* at 32.)

Deering alleges that Vector's VX-10 scale contains every claim limitation in Claims 1, 2, 4, and 5 of the '428 Patent. In its Motion for Summary Judgment, Vector argues that its scale does not infringe the patent because when the sliding weight is in the zero position it is not "disposed substantially in an imaginary plane containing the fulcrum of the beam." Vector argues that its weight does not even touch the imaginary plane, and therefore could not be "substantially in [the] imaginary plane."

DISCUSSION

Summary judgment is appropriate "if the pleadings, depositions, answers to interrogatories, and admission on file, together with the affidavits, if any, show that there is no genuine issue as to any material fact and that the moving party is entitled to a judgment as a matter of law." FED. R. CIV. P. 56(c). When deciding a motion for summary judgment, the court must consider the evidence in the light most favorable to the non-movant and draw all justifiable inferences in the non-movant's favor. *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255, 106 S. Ct. 2505, 2513, 91 L. Ed. 2d 202 (1986).

"An infringement analysis entails two steps. The first step is determining the meaning and scope of the patent claims

asserted to be infringed. The second step is comparing the properly construed claims to the device accused of infringing." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed. Cir. 1995) (*en banc*), *aff'd.*, 517 U.S. 370, 134 L. Ed. 2d 577, 116 S. Ct. 1384 (1996). Claim construction is a question of law, while infringement, whether literal or under the doctrine of equivalents, is a question of fact. *Moore U.S.A., Inc. v. Standard Register Co.*, 229 F.3d 1091, 1105 (Fed. Cir. 2000). To construe a claim, the court primarily consults the intrinsic evidence, consisting of the claims themselves, the written description portion of the specification, and the prosecution history. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582-83 (Fed. Cir. 1996). "In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term." *Id.* at 1583. If necessary, the court may also consider extrinsic evidence, such as expert testimony, inventor testimony, dictionary definitions, and technical treaties, but this extrinsic evidence may not be used to vary or contradict the terms of the claim. *Markman*, 52 F.3d at 981.

A literal infringement issue is properly decided on summary judgment "when no genuine issue of material fact exists, in particular, when no reasonable jury could find that every limitation recited in the properly construed claim either is or is not found in the accused device." *Bai v. L & L Wings, Inc.*, 160 F.3d 1350, 1353 (Fed. Cir. 1998). A claim of infringement under the doctrine of equivalents may be decided on summary judgment

> where the evidence is such that no reasonable jury could determine two elements to be equivalent . . . Of course, the various legal limitations on the application of the doctrine of equivalents are to be determined by the court . . . [I]f prosecution history estoppel would

> apply or if a theory of equivalence would entirely vitiate a particular claim element, partial or complete summary judgment should be rendered by the court, as there would be no further material issue for the jury to resolve.

Id. at 1353-54, *citing Warner-Jenkinson v. Hilton Davis Chem. Co.*, 520 U.S. 17, 38, n.8, 117 S. Ct. 1040, 1053, n.8, 137 L. Ed. 2d 146 (1997). Thus, the court must first determine whether prosecution history estoppel applies, *i.e.*, whether an aspect of the originally claimed subject matter was surrendered by amendment and is thus outside the range of equivalents to which the patentee is entitled. *Bai*, 160 F.3d at 1354. If prosecution history estoppel does not apply, the court must then determine whether a reasonable jury could find that the accused device contains elements that are equivalent to each of the claim elements. *Id.*

Claim Construction

For purposes of this motion for summary judgment, Vector has conceded that its scale has all of the elements of the patent claims with the exception of the element of the sliding weight "when in its zero position having a portion thereof disposed substantially in an imaginary plane containing the fulcrum of the beam." For convenience, the court will refer to this element as the "zero position" element.

The principal objective of this patent is "to provide a lightweight, miniaturized, portable scale which can easily and comfortably be transported in a person's shirt or coat pocket." *'428 Patent* at 2:32-35. Thus, the goals are to reduce the size and weight of the scale and to be able to manufacture the scale easily and inexpensively. The scale is composed of a carrying case and a weighing mechanism that

comprises a balance beam mounted for pivotal movement on a fulcrum provided by a pair of fulcrum posts. In order to weigh amounts up to the desired capacity, the scale must either have a long balance beam or use a heavy coarse sliding weight, which would increase both the size and the weight of the scale. *Id.* at 1:57-61. In the patent, the length of the balance mechanism of the scale is kept to a minimum by using a sliding weight that has a metallic insert to add to its mass, which allows the scale portion to be shortened but still have the higher weighing capacity. *Id.* at 1:43-48. The specification explains that in order to hold down the mass of the scale, the sliding weight "is constructed in such a manner that the metallic insert therein rests essentially in the plane of the fulcrum for the balance beam when the sliding weight is in its zero position. In this position the metallic insert is essentially neutral so for as the balance of the mechanism is concerned." *Id.* at 1:51-56. In the best mode section, the specification further explains, referring to the drawings,

> the coarse weight 35 is constructed in such a manner that the heavy metallic insert therein is offset from the pointer 37 of the weight in the direction of the fulcrum 19 for the balance beam 18. Indeed, the metallic insert 44 is offset to an extent that when the coarse sliding weight 35 is in its zero position, adjacent the cross-bar portion 27 of balance beam 18, the metallic insert is disposed substantially in the plane of fulcrum 19, *i.e.*, the imaginary vertical plane containing the center lines of fulcrum posts 21 and 22. With the center of insert 44 alligned *[sic]* precisely in the plane of fulcrum 19 the insert becomes essentially neutral so far as balance of the balance beam 18 and the holder 28 are concerned when the weight 35 is in its zero position and the holder 28 is empty.

Id. at 5:12-27. When the coarse weight is moved away from the zero position and "moved away from the plane of [the] fulcrum" the full mass of the metallic insert can be used to offset and measure the weight of substances. *Id.* at 5:31. Thus, Claims 1 and 4 specifically define this feature of the invention: "said sliding weight when in its zero position having a portion thereof disposed substantially in an imaginary plane containing the fulcrum of the beam, whereby to minimize the weight of the substance holder required to balance the beam when the sliding weight is in its zero position." *Id.* at 6:25-30, 57-62.

Vector argues that its scale does not literally infringe Claims 1, 2, 4, and 5 of the '428 Patent because it does not have a sliding weight that, when in the zero position, is in the imaginary plane of the fulcrum. Vector argues that the court should construe the claim limitation "substantially in the plane of the fulcrum" to mean that a substantial portion of the weight has penetrated and rests in the imaginary plane. Vector argues that no portion whatsoever of the sliding weight in its scale extends into the plane of the fulcrum or even any plane containing any part of the fulcrum post, and, in fact, it is physically impossible for the sliding weight of the vector scale to enter the imaginary plane of the fulcrum.

Deering, of course, argues for a broader construction of this element. Deering argues that Vector's claim interpretation reads out the term "substantially" from the claim language. Deering proposes that the court construe the claim language, "disposed substantially in the plane of the fulcrum," as meaning that the weight is either at or "close to" the plane of the fulcrum so as to minimize the weight of the beam. (Deering's Mem., at 6.) Under Deering's proposed construction, the weight need not enter the imaginary plane but need only be close to the plane. Thus, Deering argues that

the weight in Vector's scale, which its expert asserts is only 1/10 inch away from the fulcrum, is "substantially in the plane of the fulcrum."

After reviewing the intrinsic evidence, the court finds that Vector's claim construction is correct and supported by the claim language and the specification. The claims require that the weight be "disposed *substantially in* an imaginary plane containing the fulcrum." (Emphasis added.) The patent covers a scale where the weight is "substantially in" the plane, not a weight that is outside but close to the plane. In common usage, "substantially" means significantly or considerably. In the claims at issue, the word "substantially" describes how the weight is "disposed" in the "imaginary plane." The specification sheds further light on the proper construction when, in reference to the relationship between the weight and the imaginary plane, it states that the metallic insert "rests essentially in the plane of the fulcrum for the balance beam." *Id.* at 1:51-56. When describing the best mode for carrying out the invention, the specification states that "[w]ith the center of insert 44 alligned *[sic]* precisely in the plane of fulcrum the insert becomes essentially neutral." *Id.* at 5:22-24. While this describes the best mode for carrying out the invention, it indicates that the intent is to have the weight "in" the "imaginary plane," and in the best mode it would be "precisely in the plane." Thus, the court construes the element requiring the sliding weight to be "disposed substantially in an imaginary plane containing the fulcrum" to mean that the weight must enter and penetrate the imaginary plane containing the fulcrum of the beam.

Furthermore, Deering argues that summary judgment is not appropriately granted under FED. R. CIV. P. 56(F) because Vector has not responded to outstanding discovery requests. The discovery sought, like the affidavits submitted

by both parties, is extrinsic evidence. Because the court finds that, based solely on the intrinsic evidence, the meaning of the claim element here is not ambiguous, it is not necessary to consult extrinsic evidence. *See Key Pharms. v. Hercon Labs. Corp.*, 161 F.3d 709, 716 (Fed. Cir. 1998) (trial court properly relies upon extrinsic evidence "on an ultimate claim construction question in cases in which the intrinsic evidence (*i.e.*, the patent and its file history--the "patent record") does not answer the question.")

As Deering does not argue that any portion of the weight in Vector's scale enters the plane of the fulcrum, there cannot be literal infringement. The Vector scale does not contain every element of the patent claims. As there is no genuine issue of material fact regarding literal infringement, Vector's motion for summary judgment on literal infringement is granted.

Doctrine of Equivalents

Next, Vector argues that Deering is estopped from asserting infringement under the doctrine of equivalents because of prosecution history estoppel. An accused product that does not literally infringe a claim may infringe under the doctrine of equivalents if "it performs substantially the same function in substantially the same way to obtain the same result." *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608, 70 S. Ct. 854, 856, 94 L. Ed. 1097 (1950). The doctrine of equivalents, however, is not a tool for expanding the protection of a patent after issuance. *See Hormone Research Foundation, Inc. v. Genentech, Inc.*, 904 F.2d 1558, 1564 (Fed. Cir. 1990). Prosecution history estoppel "limits the range of equivalents available to a patentee by preventing the recapture of subject matter surrendered during prosecution of the patent." *Southwall*

Tech., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1579 (Fed. Cir. 1995), *citing, Townsend Eng'g. Co. v. HiTec Co.*, 829 F.2d 1086, 1090 (Fed. Cir. 1987).

Recently, the Federal Circuit fundamentally changed the law regarding prosecution history estoppel. In *Festo Corporation v. Shoketsu Kinzoku Kogyo Kabushiki Company*, 234 F.3d 558 (Fed. Cir. 2000) (*en banc*), *cert. granted*, 121 S. Ct. 2519 (2001), the Federal Circuit held that there is no range of equivalents for a claim limitation where the claim was amended for any reason related to patentability during prosecution. Any amendment "that narrows the scope of a claim for any reason related to the statutory requirements for a patent" will give rise to prosecution history estoppel with respect to the amended claim element. *Id.* at 566. The majority held that "[w]hen a claim amendment creates prosecution history estoppel with regard to a claim element, there is no range of equivalents available for the amended claim element." *Id.* at 569. The court further stated that "[w]hen no explanation for a claim amendment is established, no range of equivalents is available for the claim element so amended." *Id.* at 578.

Deering concedes that *Festo* limits the range of equivalents available on the zero position element in Claim 1 and dependent Claim 2 because it amended those claims during prosecution to achieve allowance of the claim. However, Deering argues that *Festo* does not apply to Claims 4 and 5 because it did not amend those claims during prosecution. Deering argues that the examiner initially objected to Claims 4 and 5 because he mistakenly thought they depended on earlier claims, but the claims were not amended during prosecution.

In *Builders Concrete, Inc. v. Bremerton Concrete Products Company*, 757 F.2d 255 (Fed. Cir. 1985) the Federal Circuit addressed a similar situation. Only one claim, Claim 10, was at issue in the litigation, and the applicant did not amend Claim 10 during prosecution. Even though Claim 10 was not amended, the court found that the applicant's arguments to support patentability of a different claim that contained the same claim element relinquished equivalents to that element in Claim 10. The court explained that

> [a]lthough Claim 10 is the only claim in suit, the prosecution history of all claims is not insulated from review in connection with determining the fair scope of Claim 10 . . . The fact that the 'passage' clause of patent Claim 10 was not itself amended during prosecution does not mean that it can be extended by the doctrine of equivalents to cover the precise subject matter that was relinquished in order to obtain allowance of Claim 1. It is clear from the prosecution history that the allowance of Claim 1, the broadest claim with respect to the other elements of the float, depended on the amendment narrowing its 'passage' definition to that of Claim 10.

Id. at 260. *See also Pall Corp. v. Hemasure Inc.*, 181 F.3d 1305, 1312 (Fed. Cir. 1999) ("When a claim limitation is added in order to overcome a specific cited reference, estoppel as to that limitation is generated whether the limitation is added by amendment to pending claims, or by the submission of new claims containing the limitation."); *Southwall Tech.*, 54 F.3d at 1584 ("And once an argument is made regarding a claim term so as to create an estoppel, the estoppel will apply to that term in other claims . . . If the arguments made with respect to one claim limit the range of equivalents accorded a term in that claim and that term is later

incorporated into another claim, the range of equivalents accorded the other claim must be limited in the same manner.")

Here, Deering has conceded that Claim 1 of the patent was amended during prosecution to add the zero position limitation to obtain allowance of the claim and that *Festo* requires limitation of the range of equivalents for Claim 1 and dependent Claim 2. *See* Deering Precision's Opposition at 10; Plaintiff's Response to Defendants' Statement of Material Facts, at ¶¶ 24, 25. Prosecution history estoppel thus bars the application of the doctrine of equivalents to that element in any claim of the patent, including Claim 4 and dependent Claim 5. *See Builders Concrete*, 757 F.2d at 260. "To hold otherwise would be to exalt form over substance and distort the logic of this jurisprudence, which serves as an effective and useful guide to the understanding of patent claims." *Id.* Therefore, Deering is estopped from asserting infringement under the doctrine of equivalents for the zero position element in Claims 1, 2, 4, and 5.

CONCLUSION

For the foregoing reasons, Defendant Vector Distribution System's motion for summary judgment is GRANTED.

IT IS SO ORDERED.

/s/_____
Harry D. Leinenweber, Judge
United States District Court

Date: August 31, 2001